Population—A Key Component of Planning Education for Developing Countries

Linda Lacey

During the next 20 years, much of the developing world will undergo significant demographic changes, such as population growth and urbanization. The effects of these changes can already be seen in many areas of Latin America, East Asia and especially Africa. This article suggests how to redesign population studies to provide planners with a framework for understanding the complex interrelationships between demographic factors and development. The commentary which follows provides an example of how the author and her colleagues are implementing such a program at DCRP.

Most developing countries are undergoing major demographic transitions, characterized by rapid population growth and massive urban-bound movements of population. Estimations and projections developed by the United Nations indicate that many of the poorest countries are doubling in population every 20 years (United Nations, 1985). Accelerated population growth has led to high proportions of the population under 15 years of age which, in future years, will keep crude birth rates high in spite of declining levels of fertility. This situation is most apparent in sub-Saharan African countries and poor Asian and Latin American countries, where 46 to 52 percent of the population is under the age of 15 (United Nations, 1985).

The consequences of high levels of population growth and rapid urbanization have been particularly harsh for those countries at lower stages of development. At the national level, rapid growth has a direct effect on the quantity, quality, and distribution of educational facilities and services and health care services, both preventative and curative. High rates of population growth have also led to a greatly increased number of individuals entering the labor force. This increase forces governments to absorb successively larger cohorts of young adults into urban and rural economies (Birdsall, 1977). In poorer countries, many of these young labor force entrants will experience underemployment and unemployment rather than productive lives. In rural areas of many countries, population pressures on limited land have resulted in rural out-migration, land fragmentation, overstocking and grazing, soil erosion and, in general, declines in land productivity. In urban areas, high levels of natural increase combined with rapid urban growth due to internal and international migration have led to numerous problems in cities: shortages of housing, water, sewage systems, electricity and social services; traffic congestion; and urban underemployment and unemployment.

Projects and programs designed by planners at all levels—community, rural, urban, regional and national—are affected by the demographic changes that are taking place. Population growth and rapid urbanization combined with limited resources interfere with the ability of planners to develop and implement social, physical and economic programs. However, just as population growth and rapid urbanization influence our ability to plan, population variables such as size, distribution, growth rate, age and sex composition, fertility, mortality, and migration levels, are influenced by efforts to promote social and economic development. Examples of such development efforts include squatter settlement upgrading programs in urban areas, improvements in agricultural technology, and the expansion of educational, health care facilities and other social services. Advances in transportation and communications systems, the promotion of industrialization, and integrated rural development initiatives can alter demographic trends.

The interrelationship between population and development is highly complex. However, in the past two decades, a wealth of literature has emerged that focuses on the consequences of population growth, the determinants of demographic change, population and development interrelationships and, in recent years, alternative ways to integrate population programs into development planning. It is important for planners to understand the relationships that exist among demographic factors – fertility, mortality and migration – as well as the many relationships that exist between population and development variables. Knowledge of this nature would assist professionals in developing more realistic goals and objectives. It would also raise awareness of the demographic consequences of planning actions and aid the profession in promoting the development and integration of population policy intervention strategies into planning activities at the national and subnational levels.

Few planning schools provide adequate training in the field of population. Much of the educational training related to population is limited to demographic estimation and projection techniques that require reliable census data and other secondary sources. However, as enrollments of students from developing countries are increasing in many programs across the country, many schools have or are in the process of developing international concentrations within their programs. For planning schools that focus on the needs of planners from developing countries, it is essential to redesign the teaching of population. It is important to have courses that explore population and development interrelationships, that assist students in developing skills in population intervention policies that include both fertility regulation measures and spatial policies, and that provide skills in estimating and projecting population trends in countries where census data are unavailable or unreliable.

The purpose of this article is to explore a two-course sequence in population for students who are either from developing countries or who are interested in pursuing a career in planning in developing countries. The first course, Population and Planning in Developing Countries, investigates the various interrelationships that exist between population and planning. The second course, Demographic Techniques, assists students evaluating the quality of demographic and other population-related data and developing skills in estimation and projection techniques in situations where census data and vital registration systems are unavailable or unreliable. Most sociology or biostatistics departments offer demographic techniques courses that focus predominately on developing countries. Given the limited faculty resources in most planning departments, I suggest that students in developing countries concentrations take a demographic technique course as their second population course outside of the planning department.

West Point Community, a large squatter settlement of about 25,000 in Monrovia, Liberia

It should be mentioned that, in most universities, courses are also offered in social and economic demography which expose students to population and development issues. However, these courses are not tailored to the needs of planning students, since much of the focus is on national development. Planning students require exposure to population-planning interactions at subnational levels – rural, regional, urban and local community levels.

The article is presented in two sections. First, a brief overview is provided on the demographic outlook for developing countries with an emphasis on Africa, since most African countries are experiencing declining economies, rapid population growth, and rapid urbanization. Next, a description is provided on possible topics that could be incorporated into a course on Population and Planning. Ideally, the materials should be presented as an entire course. However, it is hoped that planning educators with limited resources will be able to choose possible topics that can be incorporated into existing theory and methodology courses.

Demographic Outlook

Of the regions of the developing world, Africa will experience the greatest degree of demographic change during the next 20 years. Medium variant estimates and projections made by the United Nations indicate that from 1980 to the year 2000 Africa will increase in population by 401 million or 81 percent, Latin America by 188 million, or 51 percent; East Asia by 287 million, or 24 percent; and South Asia by 666 million, or 47 percent (United Nations, 1985). High levels of population growth in African countries are readily apparent in the table, where medium variant estimates and projections are provided for select countries. The data clearly indicate that most countries have high rates of annual growth and will continue to double in population size every 20 years. In Kenya, with the highest annual growth rate of 4.12 percent, the average woman has eight children during her reproductive years. Consequently, the nation's population is expected to more than double by the end of the century, rising from 7.9 million in 1960 to 16.7 million in 1980 and to a projected 38.5 million by the year 2000.

Percent of Urban Population and Levels of Population Growth in Select African Countries

	Urban Population (in Percentages)					
	1950	*1960*	*1970*	*1980*	*1990*	*2000*
World						
Developed Regions	53.6	60.3	66.4	70.6	74.2	77.8
Africa	14.8	18.4	22.9	28.7	35.5	42.2
Latin America	41.1	49.3	57.4	65.3	71.9	76.6
Asia	16.9	20.6	23.6	26.6	30.3	35.7
Select sub-Saharan African Countries						
Ghana	14.5	23.3	29.1	35.9	43.5	51.2
Kenya	5.6	7.4	10.2	14.2	19.5	26.2
Liberia	13.0	18.6	26.0	34.9	44.0	52.1
Namibia	15.4	23.3	33.5	45.2	57.0	66.0
Nigeria	10.5	13.1	16.4	20.4	26.1	33.4
Senegal	16.5	22.4	29.6	38.0	46.7	54.9
Swaziland	1.4	3.9	9.7	19.8	33.1	44.5
Tanzania	3.6	4.8	6.9	11.8	18.1	25.0

Population Estimates and Projections for Select African Countries (Population in 1,000s)

African Countries	*Annual Rates of Growth 1980–85*	*1950*	*1960*	*1970*	*1980*	*1990*	*2000*
Ghana	3.25	4,242	6,772	8,614	11,457	15,886	21,923
Kenya	4.12	5,822	7,903	11,290	16,766	25,413	38,534
Liberia	3.16	855	1,047	1,365	1,871	2,571	3,564
Namibia	2.78	665	820	1,042	1,349	1,787	2,382
Nigeria	3.34	32,935	42,305	57,221	80,555	113,343	161,930
Senegal	2.66	2,500	3,041	4,008	5,708	7,501	10,036
Swaziland	3.03	277	338	426	558	759	1,041
Tanzania	3.52	7,886	10,025	13,513	18,867	26,998	39,129
Zambia	3.31	2,440	3,141	4,189	5,648	7,912	11,237

(Source: The United Nations. 1985. United Nations *World Population Prospects: Estimates and Projections as Assessed in 1982*. New York: United Nations.)

High levels of population growth are a result of high fertility rates, combined with the substantial reductions in infant and child mortality due to advances in health care, hygiene and nutrition and improved standards of living. Estimates of crude birth rates for Africa as a region show that rates have remained relatively constant during the past 30 years (49.8 per 1,000 in 1950 to 48.8 in 1980), while mortality rates have declined from 29.3 in 1950 to 17.7 per 1,000 in 1980 (World Bank, 1984).

Annual rates of growth have declined in many Latin American countries and most Asian countries. However, in absolute numbers these countries are still experiencing growth. While fertility levels have been reduced, mortality rates are also declining. Because of declines in mortality rates and the young age structure of population in these regions, we can expect fairly high levels of population growth in absolute numbers to take place during the coming decades (United Nations, 1985).

High levels of population growth are accompanied by rapid urbanization. Urban growth is a consequence of three factors: urban natural increase, migration and reclassification of urban areas. According to the United Nations, only 40 percent of urban growth is due to migration in developing countries (United Nations, 1982), while natural increase accounts for about 58 percent. This assertion is in debate in much of the migration literature; for example, Todaro argues that most urban growth is a result of migration. High levels of urban growth due to natural increase are a result of high levels of fertility among migrants, since many arrive in cities in their peak reproductive years (Todaro, 1979).

Urban-bound movements of population are in part a response to population pressures on limited resources. These pressures are most intense in rural areas, where population growth can exceed the productivity of the land. Some rural out-migrants move to more productive rural areas to seek employment and/or land for farming, but many move to urban locales. While out-migration can take place because of negative factors associated with the place of origin, the decision to move can also be made because of the attraction or pull of cities. Individuals and families from both rural and urban places of origin are attracted to urban locales for educational facilities, economic opportunities, and/or for the amenities that represent modern life-styles.

Africa as a region will experience the highest level of urban growth over the next two decades, in part because the region has been the least urbanized in the past. The spatial transformations that developing regions are experiencing can also be observed in the table. It should be mentioned that the data are based on estimations and projections and provide a crude indication of urban growth, since countries vary in their definition of urban. In 1950, 32.8 million Africans resided in urban centers. By 1980, 136.7 million lived in urban locales and by the year 2000, we can expect close to 370 million to be urban dwellers (United Nations, 1985). Countries in East and West Africa that were the least urban in 1950 will experience the most urban growth. In Liberia, for example, only 13 percent of the population lived in urban centers in 1950, but if present trends continue, that rate is expected to increase to 52.1 percent by the year 2000. Similar patterns can be observed for other countries such as Ghana, Namibia, Senegal, Swaziland and Tanzania.

Proposed Course in Population and Planning

In order to develop effective plans and programs that take into account high levels of population growth and rapid urbanization, it is important to consider the recent demographic trends. In this section, I present a number of topics that could be incorporated into a course on Population and Planning in Developing Countries. Topics for the course are listed below, followed by a brief description of some of the major components:

1. Demographic Concepts and Measurements
2. Population and Development Interrelationships
   a. Transition Theories
   b. Consequences of Population Growth
   c. Determinants of Demographic Behavior
3. Population Policy Intervention Strategies
4. Population and Planning Policy Questions

1. Demographic Concepts and Measurements

To understand the demographic trends that are taking place, it is important for students to know basic concepts and measurements of the components of demographic change: mortality, fertility, migration and nuptiality. In the analysis of fertility, they should know and be able to calculate crude birth rates, age-specific fertility rates, the general fertility rate, total fertility rates, and gross reproduction and net reproduction rates. They should also be able to calculate simple rates and ratios to analyze mortality, migration and nuptiality. Students should also be exposed to general concepts of population change involving the interaction of the components of demographic change – the balancing equation, natural increase, annual rates of growth, doubling time and stable population models. It is also important for them to study the age-sex structure and composition of populations using simple techniques such as dependency ratios, sex ratios, aging ratios, and population pyramids. These introductory measures should be complemented in their second semester with a course in demographic techniques.

2. Population and Development Interrelationships

Literature on the relationship between population and development falls under three broad headings: (a) transition theories which focus on the process of demographic change in the context of development, (b) consequences of population growth and rapid urbanization as it relates to development, and (c) literature on the determinants of demographic behavior.

a. Demographic Transition Theories

Once students have been exposed to basic demographic concepts and measurements, it is important to introduce them to theories that explain the process of demographic change as countries undergo stages of development. Three "transition theories" have emerged that attempt to relate demographic change to stages of cultural and socioeconomic development. All three are based upon the historic precedents of the developed world. Although these theories have been heavily criticized, they do provide students with a framework with which to understand the types of demographic characteristics that we can expect for countries at different stages of development.

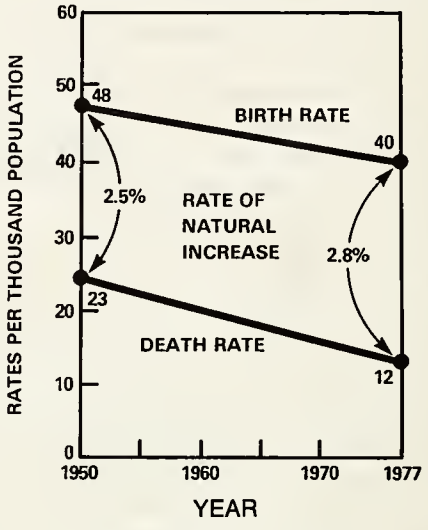
The most widely-known theory is the demographic transition theory. It was first introduced by Notestein in 1945 and was more recently revised by Caldwell in his efforts to explain fertility behavior in the African context (Caldwell, 1978). The theory attempts to identify economic, social, cultural and technological factors that influence fertility and mortality rates in societies that are undergoing various stages of development.

In 1971, two additional theories were introduced that focused on mortality reductions and spatial patterns of mobility. Omran introduced the epidemiologic transition theory to explain the process of mortality reduction. He states that "the theory of epidemiologic transition focuses on the complex change in patterns of health and disease and on the interactions between these patterns and their demographic, economic, and sociologic determinants and consequences" (Omran, 1971). Reductions in mortality rates have accounted for much of the increase in rapid population growth. Factors that have led to mortality decline are highly complex and vary for countries that are at different stages of development.

Zelinsky, a geographer, introduced the mobility transition model to explain the types of spatial movements that we can expect as countries undergo the process of modernization. He states that, "There are definite, patterned regularities in the growth of personal mobility through space-time during recent history, and these regularities comprise an essential component of the modernization process" (Zelinsky, 1971, p. 121). He introduces students to the types of spatial movements and vital transitions—fertility and mortality—that take place as societies move from "pre-modern" traditional societies to advanced societies. All three theories assist students in analyzing processes of demographic change in the context of modernization and development.

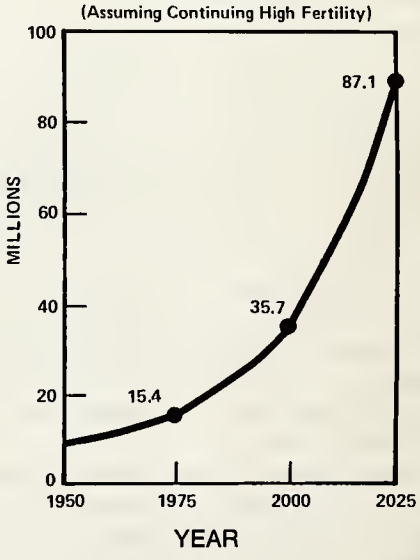
TANZANIA

Birth Rates, Death Rates, and Rates of Natural Increase, 1950-1977



Population Growth, 1950-2025

(Assuming Continuing High Fertility)



Source: Resources for Awareness of Populations, Impact on Development. The Futures Group, Washington, D.C., 1981.

b. Consequences of Demographic Change

Much of the literature on the consequences of population growth focuses on the negative impact of population growth on the achievement of development objectives. Readings on rapid urbanization tend to investigate both the positive and negative aspects of urban-bound movements of population at the national and individual level. It is important for students to be exposed to literature in both of these areas. A classic book on population and development, *Population Growth and Economic Development in Low Income Countries*, was written by Coale and Hoover in 1958, to introduce students to macro-level consequences of rapid population growth. At The University of North Carolina, we use microcomputer models as well as literature on the consequences of population growth on development to examine Coale and Hoover's hypotheses. The RAPID model, Resources for the Awareness of Population Impacts on Development, explores the impact of rapid population growth on meeting development needs in a number of different sectors—agriculture, health, education, urbanization and housing. Models are available for over 20 countries at various levels of development. Students can change assumptions in the model and project future relationships to the year 2030. The models and literature alert students to the interdependencies that exist between population growth and development.

It is also of crucial importance that students be exposed to the microconsequences of rapid population growth, such as the detrimental effect of large families on maternal and child health and on child development. This area may be of particular interest to students who are interested in social welfare programs for the poor. It would assist them in understanding the interrelationships between family size, birth spacing, morbidity, malnutrition, low productivity, and poverty. Birdsall provides excellent summaries and bibliographies for this literature in some of her work (Birdsall, 1977; World Bank, 1984).

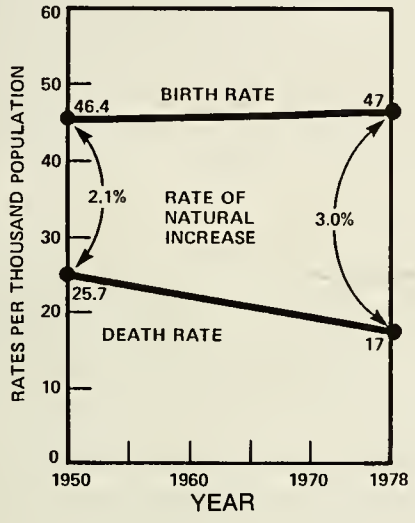
c Determinants of Demographic Behavior

Knowledge of the determinants of demographic change assists students in understanding the factors that influence fertility, mortality and migratory behavior. Reviews of literature in this area provide insights on measures that can be implemented to control and guide demographic processes. More important, it provides a basis from which qualitative assessments can be made of future demographic trends.

In the past two decades, a wealth of literature has emerged on the determinants of fertility. The earlier literature attempted to explore the direct relationship between fertility and a host of socioeconomic variables, such as income, industrialization, urbanization, education, health, the status of women, family structure, religion, and ethnicity (Hardiman and Midgley, 1982). Different studies established different associations, and few explained why odd relationships could be found. Many of the earlier studies failed to realize that fertility is subject to biological contraints and is influenced by demographic

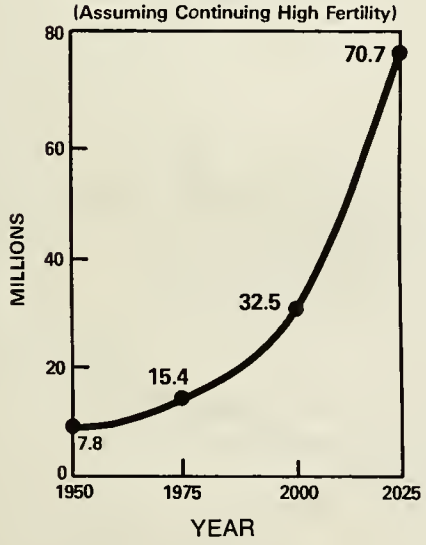
PERU

Birth Rates, Death Rates, and Rates of Natural Increase, 1950-1978



Population Growth, 1950-2025

(Assuming Continuing High Fertility)



Source: Resources for Awareness of Populations, Impact on Development, The Futures Group, Washington, D.C., 1981.

events as well as socioeconomic factors. For example, increases in the age of marriage contribute significantly to reductions in fertility. Davis and Blake, and, in recent years, Bongaarts, have introduced more realistic models to understand the interrelationship between fertility, demographic events and socioeconomic factors (Davis and Blake, 1956); Bongaarts et al., 1984). Much of the literature deals with the proximate determinats of fertility. The Bongaart model, in particular, shows that two classes of determinants influence fertility behavior. (Proximate determinants, consist of all biological and behavioral factors. These include as proportion of married women, frequency of intercourse, postpartum abstinence, lactational amenorrhea, contraception, induced abortion, natural sterility and pathological sterility; and (b) socioeconomic and environmental variables, such as social, cultural, economic, institutional, psychological, health and environmental considerations. In the model background, variables influence fertility through the proximate determinants, which directly affect fertility.

Socioeconomic Environmental Variables ► Proximate Determinants ► Fertility

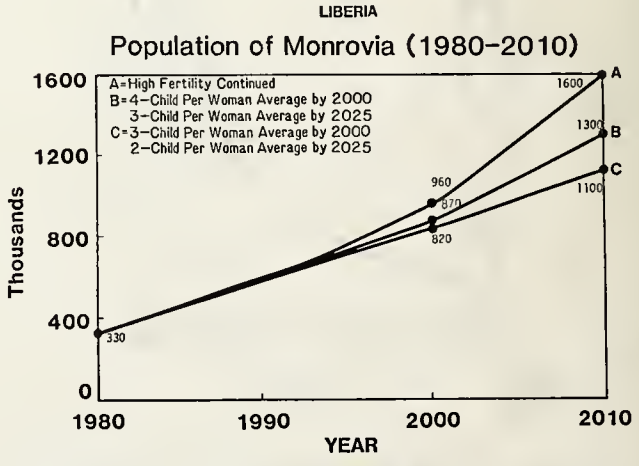
The proximate determinants of fertility literature evolved to assist those involved in developing and implementing population policies and/or family planning programs to understand the factors that influence reductions in fertility. The literature is beneficial for planners in that it provides a basis from which implications for future fertility trends can be derived.

Another body of literature on the determinants of fertility focuses on the economic rationale of family size. This literature consists of micro-level theories introduced by Easterlin on the economics of having children (1969) and writing in recent years by Caldwell on inter-generational flows of wealth. It also considers macro-level studies that investigate relationships between fertility and economic development. While fertility is lowest in countries which have attained high levels of economic development, some poor countries, such as Costa Rica, Cuba and Sri Lanka, are also experiencing significant reductions in fertility. It is important for students to investigate both the micro- and macro-level factors that lead to fertility reductions.

Of the components of demographic change, migration is most strongly influenced by planning decisions and is the factor that is most likely to lead to rapid growth at the sub-national level. In the last two decades, a great deal of literature has been written on migrant selectivity, factors that influence the decision to move, and spatial patterns of movement. Empirical studies and theoretical models have been developed by scholars in economics, sociology, geography, demography, cultural anthropology, and regional planning. Most of the studies focus on the individual or household unit. Literature on the migration decision-making process include Lee's theory of migration (1966), Todaro's economic models of employment (1968) and DeJong's reader on migration decision-making (1981). There is also a wealth of literature on migrant selectivity in books and key demography journals, such as *International Migration Review, Demography,* and *Population and Development Review.* Caldwell's book, *African Rural-Urban Migration,* is a classic introduction to migrant differentials in the African context (1968). Orlansky and Dubrovsky's work, *The Effects of Rural-Urban Migration on Women's Role and Status in Latin America,* provides a comprehensive overview on female migration pattern differentials (1978). These sources assist students in understanding who moves and why. More importantly, it alerts students to the impact of sub-national planning activities on spatial mobility.

3. Population Policies

Population policies are explicit statements by national governments stating their intentions to establish demographic goals and objectives that will affect fertility, migration, and mortality. Measures to regulate fertility include: (a) the provision of family planning services either through clinics, outreach programs and/or through social marketing activities; (b) the dissemination of population, family life, and sex education information; (c) programs and policies to improve the status of women; (d) the provision of incentives and disincentives to encourage families to regulate family size and (e) the introduction of legal reforms.



Source: Resources for Awareness of Populations, Impact on Development. The Futures Group, Washington, D.C., 1983.

Most measures to alter mortality focus on improving the quality of health and nutrition of the population. There are a variety of strategies to alter migration patterns: rural development programs can include a full range of activities to improve living conditions and economic activities in rural areas; dispersed urbanization strategies can include the development of new major cities or growth centers, the development of secondary or regional cities and/or the development of rural service centers or market towns; restrictive policies to control individual movements to cities; and land colonialization schemes.

In most Asian countries and in some Latin American countries, governments have implemented population policies to control rapid population growth. Increasingly, African countries are also becoming aware of the need to control population growth and maldistributions of population. Countries such as Cameroon, Liberia, Nigeria, Rwanda, Senegal and Sierra Leone are actively pursuing population policies in order to achieve national development objectives and to improve the health of children and mothers. Among the other sub-Saharan African countries devising development plans which discuss the problems created by rapid population growth and/or state the need for family planning services are Botswana, Gambia, Ghana, Kenya, Lesotho, Mauritius, Uganda and the Zambia (Isaacs, 1984).

Most of these countries recognize population policies as integral parts of efforts to promote social and economic well-being. This awareness was stated in the World Population Plan of Action during the first World Population Conference in Bucharest in 1974 and reaffirmed at the 1984 International Conference on Population in Mexico City, where 147 governments expressed their support for the establishment and implementation of policies to alter current demographic trends.

Effective policy implementation requires the integration of intervention strategies and programs into a number of socioeconomic development activities at all levels of governments and in most fields of planning. Since most population policies are implemented through ministries of planning, it is important for students to review the evolution of population policies and study the issues and problems of effective implementation. Planners who obtain positions in national or state-level planning agencies are assisting population policy implementation efforts by coordinating activities among different ministries, by ensuring that socioeconomic plans promote aspects of population programs and by controlling factors that have negative demographic effects.

4. Population and Planning Policy Questions

Much of the literature on population and development issues focuses on these relationships at the national level. In the last section of the course, students, through individual research projects, should attempt to investigate various population-planning relationships at the subnational region as it relates to a variety of planning issues: rural development, regional planning, housing, social services planning, transportation planning, and urban planning. In examining each of the areas, it is important to discuss the following questions:

a. How do present and future population growth and distribution influence planning activities?
b. How do planning decisions alter demographic variables? What are the long-term impacts of planning activities on demographic trends?
c. How should planners redesign strategies to promote socioeconomic change, given existing and future demographic trends?

The answers to these questions will vary since countries are at different levels of development. The questions do, however, provide a framework for developing innovative planning solutions that take into consideration bleak demographic trends.

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Conclusion

Planners cannot alter the present demographic trends in the near future. At best, we can attempt to understand the processes and alter goals, objectives, plans and programs to take into account rapid population growth and rapid urbanization. Planners can assist in controlling and

guiding long-term demographic trends by becoming involved in population policies, both fertility regulation programs and spatial strategies.

I have introduced a number of topics and subtopics that can assist planning students in understanding population and development interrelationships. Knowledge in these areas will improve our ability to plan effectively in developing countries. It is hoped that planning educators will find the topics useful and will integrate components into existing courses or will design new courses that address population and planning issues. □

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REFERENCES

Agency for International Development. *World Population Plan of Action.* Washington, DC: AID, 1976.

Balan, J. *Why People Move.* Paris: UNESCO Press, 1981.

Bilsborrow, R. E. 1976. *Population in Development Planning: Background and Bibliography.* Chapel Hill, NC: Carolina Population Center.

Birdsall, N. 1977. "Analytical Approaches to the Relationship of Population Growth and Development." *Population and Development Review* 3(1):63- 102, March/June.

Bongaarts, J., O. Frank, and R. Lesthaeghe. 1984. "The Proximate Determinants of Fertility in Sub-Saharan Africa." *Population and Development Review* 10(3):511-38.

Caldwell, J. C. 1978. "Toward a Restatement of Demographic Transition Theory." *Population and Development Review* 2(3):321-66.

_____. *African Rural-Urban Migration.* Canberra: Australian National University Press, 1968.

Cassen, R., and M. Wolfson, eds. *Planning for Growing Populations.* Paris: Development Centre of the Organization for Economic Cooperation and Development, 1978.

Coale, A. J., and E. M. Hoover. *Population Growth and Economic Development in Low-Income Countries.* Princeton, NJ: Princeton University Press, 1958.

Davis, K., and J. Blake. 1956. "Social Structure and Fertility: An Analytic Framework." Economic Development and Cultural Change 4(4):211-35.

Easterlin, R. A. "Towards a Socioeconomic Theory of Fertility: A Survey of Recent Research on Economic Factors in American Fertility." *Fertility and Family Planning,* S. J. Behrman, L. Corsa, and R. Freedman (eds.). Ann Arbor, MI: University of Michigan Press, 1969, pp. 127-56.

Findley, S. *Planning for Internal Migration.* Washington, DC: United States Bureau of the Census, 1977.

Fuchs, R. J., and G. J. Demko. 1983. "Rethinking Population Distribution Policies." *Population Research and Policy Review* 2:161-87.

Ghosh, P. K. *Urban Development in the Third World.* Westport, CT: Greenwood Press, 1984.

Hardiman, Margaret, and J. Midgley. *The Social Dimensions of Development.* New York: John Wiley and Sons Limited, 1982.

Isaacs, S. L. *Laws and Policies Affecting Fertility: A Decade of Change, Population Reports,* Series E, No. 7. Baltimore, MD: Population Information Programs, Johns Hopkins University., 1984.

Omran, A. R. 1971. "The Epidemiologic Transition: A Theory of the Epidemiology of Population Change." *Milbank Memorial Fund Quarterly* 69(4).

Orlansky, D., and S. Dubrovsky. 1978. *The Effects of Rural-urban Migration on Women's Role and Status in Latin America.*

Robinson, W. C. *Population and Development Planning.* New York: The Population Council, 1975.

Rondinelli, D. A. 1982. "The Potential of Secondary Cities in Facilitating Deconcentrated Urbanization in Africa." *African Urban Studies* 13:9-29.

Stamper, B. M. *Population and Planning in Developing Nations.* New York: The Population Council, 1977.

Todaro, M. P. *Urbanization in Developing Nations: Trends, Prospects and Policies.* Population Council Working Paper, No. 50. New York: The Population Council, 1979.

_____. 1968. "A Model of Labor Migration and Urban Unemployment in Less Developed Countries." *American Economic Review* 69:138-48.

United Nations. *World Population Prospects Estimates and Projections as Assessed in 1982,* Population Studies No. 86. New York: Department of Affairs, Population Studies No. 86. New York: United Nations, 1985.

_____. *Proceedings on the United Nations Ad Hoc Expert Group Meeting on the United Nations Ad Hoc Expert Group Meeting on the Manual on Integrating Population Variables into Development Planning.* New York: Population Division, United Nations, 1984.

_____. *Population and Development Modelling,* Population Studies No. 73. New York: Population Division, United Nations, 1984.

World Bank. *World Development Report.* New York: Oxford University Press, 1984.

Zelinsky, W. 1971. "The Hypothesis of the Mobility Transition." *Geographical Review* 16(2):219-49.